

A NEW SPECIES OF THE GENUS

DIPLOTHROMBIUM BERLESE (ACARI, PROSTIGMATA, JOHNSTONIANIDAE) FROM POLAND, BASED ON THE LARVA

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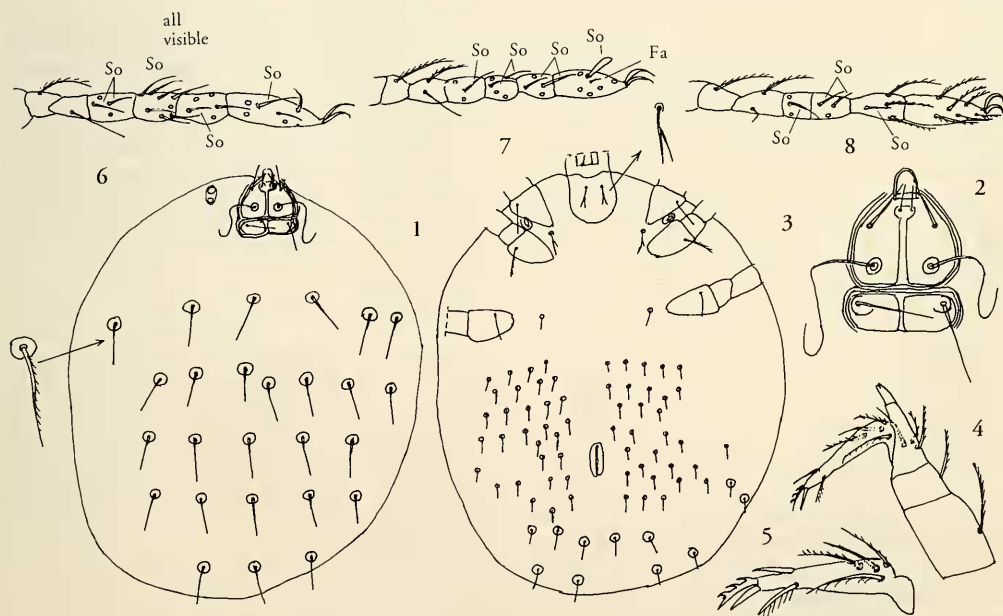
Diplothrombium ludwinae sp. n. (larva) is described from Poland and a key is provided to the larval stages of the genus.

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Key words. – Acari, Johnstonianidae, new species, Poland.

The genus *Diplothrombium* Berlese was established in 1910. Since then, only four species based on larvae have been described, viz. *D. monoense* Newell, *D. cascadenae* Newell, both from the U.S.A., *D. moldavicum* Feider from Romania and *D. newelli* Robaux

from the U.S.A. (Newell 1957, Feider 1959, Robaux 1977, Southcott 1987). Larvae of *Diplothrombium* were found attached to aquatic beetles (Coleoptera) (Newell 1957) and Tipulidae (Diptera) (Feider 1959). Up to now, only one species was known from



Figs. 1-8. *Diplothrombium ludwinae* sp. n. -- 1, idiosoma, dorsal view; 2, scutum; 3, idiosoma, ventral view; 4, palp; 5, palp-tarsus; 6, leg I, tarsus-trochanter; 7, leg II, tarsus-trochanter; 8, leg III, tarsus-trochanter.

Table 1. Measurements in μm of *Diplothrombium ludwinae* sp. n., larva, holotype.

Length of idiosoma	904
Width of idiosoma	752
Length of scutum	108
Width of scutum	76
Distance between bases of AL (AW)	46
Distance between bases of PL (PW)	56
Length of anterior scutula (AL)	42
Length of posterior scutula (PL)	60
Distance between ASE (SBa)	10
Distance between PSE (SBp)	40
Length of anterior sensilla (ASE)	16
Length of posterior sensilla (PSE)	134
Distance between ASE and PSE (ISD)	38
Distance between AL and PL (AP)	48
Distance between AL and ASE (AAS)	20
Ocular sclerite	34
Length of dorsal setae (DS)	78-90
Coxala I	56
Coxala II	58
Coxala III	40
fd	44
gd	36
Ta I	104
Ti I	46
Ge I	44
Tf I	52
Bf I	46
Tr I	40
Cx I	88
Ta II	84
Ti II	44
Ge II	40
Tf II	40
Bf II	40
Tr II	34
Cx II	76
Ta III	92
Ti III	62
Ge III	46
Tf III	32
Bf III	62
Tr III	46
Cx III	86
Ta I (L) : Ta I (H)	3.25
Ti I : Ge I	1.04
Ti II : Ge II	1.10
Ta III : Ge III	2.00
AW : ISD	1.21
ISD : AP	0.79
Ti I : AW	1.00
Ti III : AW	1.35
AW : AL	1.09

Europe. In the present paper a new species is described from Poland, and a key to the larvae of *Diplothrombium* is provided. Terminology for setae and structures follows Southcott (1988). All measurements are in micrometers (μm).

Diplothrombium ludwinae sp. n.
(figs. 1-8)

Type material. — Holotype larva: Poland, Zawoja-Markowe, 800m (voi. Bielsko-Biala), 9.VI.1983, beech-coniferous forest from plants, leg. R. Hairlinger (in Museum of Natural History, Wrocław University).

Description

Idiosoma longer than wide, oval, anterior part of idiosoma somewhat deformed. Dorsum with 27 barbed setae arranged in five rows: 6, 7, 6, 5 and 3; each setae placed on oval and small platelet (fig. 1). Eyes small. Scutum longer than wide; behind bases of PSE with transverse crista which divides scutum into unequal parts. Scutum with two pairs of scutalae (AL, PL); posterior setae PL longer than AL; further with two pairs of sensilla (ASE, PSE) from which posterior sensilla PSE many times longer than ASE. Between basis of ASE and posterior margin of scutum a longitudinal crista. All scutalae and sensilla smooth. Anterior margin with nasus (fig. 2). Ventral side of idiosoma with 74 setae, each placed on small platelet; posterior setae somewhat longer and placed on larger platelets. Anus located in middle part of opisthosoma. Two setae between coxae III.

Gnathosoma short, its base with two bifurcate setae. Palpfemur and palpgenu each with one barbed seta; palptibia with three setae, two of these are barbed. Palptarsus long and with eight setae, five of which are barbed (figs. 4, 5).

Legs short, length (including coxae, excluding claws): I 420, II 358, III 426; coxa I with one slightly barbed setae; medial coxala I bifurcate and separate from coxa; coxa II with one barbed seta; coxa III with one smooth seta. Tarsus II with enlarged solenidion and small famala. Number of solenidions and other setae on tibia, genu, telofemur, basifemur and trochanter: I - Ti 2 So + 6, Ge 7 So + 3, Tf 2 So + 4, Bf 1, Tr 1; II - Ti 2 So + 6, Ge 2 So + 4, Tf 1 So + 4, Bf 2, Tr 1; III - Ti 1 So + 6, Ge 2 So + 4, Tf 1 So + 3, Bf 2, Tr 1.

Measurements of holotype, see table 1.

Remarks. — *D. ludwinae* sp. n. is similar to *D. moldavicum* Feider and *D. cascadenae* Newell. It can be distinguished from the first species by the absence of a transverse bar on scutum above the posterior sensilla, barbed coxalae II, shorter legs I-III and tarsi I-III, especially I and III; from the second species by the shape of the posterior part of the scutum and the smooth scutalae.

Etymology. — Name derived from Ludwina.

Key to species of *Diplothrombium* larvae

1. Scutum with three transverse bars, two of them placed before the bases of posterior scutal sensilla *D. moldavicum* Feider, 1959

- Scutum without transverse bars before the bases of posterior scutal sensilla2
- 2. Scutum with longitudinal and transverse bars below the bases of posterior sensilla3
- Scutum without transverse and longitudinal bars below the bases of posterior sensilla4
- 3. Scutalae barbed, distance between bases of posterior scutalae PW distinctly larger than the distance between bases of anterior scutalae; AW = 1.85*D. cascadenae* Newell, 1957
- Scutalae smooth, distance between bases of posterior scutalae somewhat larger than the distance between bases of anterior scutalae; AW = 1.22
.....*D. ludwinae* sp. n.
- 4. Medial coxala I separated from coxa, genua I with 8 solenidions*D. newelli* Robaux, 1977
- Medial coxala I on coxa I, genua I with 15 solenidions*D. monoense* Newell, 1957

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